

Welding

Course Description

This course provides an in-depth study of metals and fabrication with metal products. It also provides the opportunity to explore the careers in agricultural metal fabrication. Classroom and laboratory activities are supplemented through supervised agricultural experiences and leadership programs and activities.

Course Code: 016004

Endorsements to

teach: AFNR

Programs of Study to which this Course applies:

Power, Structural and Technical Systems
 Power, Structural and Technical Systems Plus
 Diversified Agriculture Systems
 Diversified Agriculture Systems Plus

AFNR.HS.6.1	
Apply physical science principles and engineering applications to solve problems and improve performance in AFNR power, structural and technical systems.	
AFNR.HS.6.1.a	Apply physical science principles to metal fabrication using a variety of welding and cutting processes.
AFNR.HS.6.1.b	Apply physical science and engineering principles to design, implement, and improve safe and efficient mechanical systems in AFNR situations.
AFNR.HS.6.2	
Operate and maintain AFNR mechanical equipment and power systems.	
AFNR.HS.6.2.a	Perform preventative maintenance and scheduled service to maintain equipment, machinery and power units used in AFNR settings.
AFNR.HS.6.2.b	Demonstrate proper safety while operating machinery and power equipment.
AFNR.HS.CR.1	
Describe career opportunities and means to achieve those opportunities in each of the AFNR career pathways.	
AFNR.HS.CR.1.a	Evaluate and implement the steps and requirements to pursue a career opportunity in an AFNR career pathway.
AFNR.HS.CR.1.b	Examine and choose career opportunities that are matched to personal life skills, talents, and career goals in an AFNR pathway of interest.
AFNR.HS.CR.2	
Demonstrate employability skills for college and career readiness.	
AFNR.HS.CR.2.a	Model personal responsibility in the workplace and community.
AFNR.HS.CR.2.b	Speak using strategies that ensure clarity, logic, purpose and professionalism in formal and informal settings.
AFNR.HS.CR.2.c	Produce clear, reasoned and coherent written and visual communication in formal and informal settings.
AFNR.HS.CR.2.d	Synthesize information, knowledge and experience to generate original ideas and challenge assumptions in the workplace and community.
AFNR.HS.CR.2.e	Apply reason and logic to evaluate workplace and community situations from multiple perspectives.
AFNR.HS.CR.2.f	Investigate, prioritize and select solutions to solve problems in the workplace community.
AFNR.HS.CR.2.g	Contribute to team-oriented projects and build consensus to accomplish results using cultural global competence in the workplace and community.
AFNR.HS.CR.4	
Identify and demonstrate workplace safety.	
AFNR.HS.CR.4.a	Identify and explain the implication of required regulations to maintain and improve safety, health and environments management systems.
AFNR.HS.CR.4.b	Apply health and safety practices to AFNR workplaces.
AFNR.HS.CR.4.c	Use appropriate protective equipment and demonstrate safe and proper use of AFNR tools and equipment.
AFNR.HS.CR.5	

Evaluate the nature and scope of the AFNR Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy.	
AFNR.HS.CR.5.a	Research, examine and discuss issues and trends that impact AFNR systems on local, state, national and global levels.
AFNR.HS.CR.6	
Identify and demonstrate leadership skills and traits in demand of leadership roles in the agriculture industry.	
AFNR.HS.CR.6.b	Craft SMART goals to achieve by the end of a specific agricultural education course.
AFNR.HS.CR.6.c	Write a career objective.
AFNR.HS.CR.6.d	Write a connection statement explaining how current coursework contributes to his or her career objective.
AFNR.HS.CR.6.e	Generate a personal statement explaining how he or she hopes to serve the people around them in their community and society.
AFNR.HS.CR.6.f	Write and deliver a speech focused on a currently controversial topic within the agricultural industry while arguing both points of view.